

REMARKS

The Final Office Action mailed on March 24, 2010, has been received, and carefully considered.

The objection to the specification is obviated by appropriate amendment. Specifically, the word "magnesium" has been changed to "manganese" on page 1, line 5, of the specification, to correct an obvious error. Furthermore, the second comma after the word "aluminum" on page 5, line 2, has been deleted.

No new matter has been introduced by the above amendments.

The objection to claim 12 has been obviated by appropriate amendment. Specifically, the word "is" has been inserted between "pulp" and "used" in claim 12, line 2.

Claims 7 and 10 were rejected under 35 U.S.C. 112, second paragraph. It is believed that the Examiner intended also to include claims 11 and 12 in this rejection.

The rejection is obviated by appropriate amendment. Specifically, the term "made to disappear, producing" has been changed to "processed to produce" in claim 7, and the term "antacid" in claim 10, has been changed to "an acid-resistant material".

As to claims 11 and 12, antecedent basis for the term "pulp" is provided by the amendment to claim 7.

No new matter has been introduced by the above amendments.

It is believed that the claims now fully comply with the requirements of 35 U.S.C. 112, second paragraph.

Accordingly, the rejection under 35 U.S.C. 112, second paragraph, should be favorably reconsidered and withdrawn.

Claims 7-12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Carosella (US 2,766,197) in view of Globus (US 3,106,451).

Applicants respectfully submit that the cited prior art does not disclose or suggest Applicants' invention, as presently claimed. Reconsideration and allowance of the pending claims is therefore respectfully requested in view of the following remarks.

The Carosella reference discloses treatment of a slag obtained from the reduction in a manganese ore electric oven in an electric furnace. The method treats slag from a manufactured ferromanganese with high Mn content. The slag structure is a vitrified one of calcium silicate with MnO (small amounts of alumina and MgO), which is different from the flying powders of regular Fe-alloy furnaces or electrolytic deposits.

Furthermore, in Carosella, the slag is leached with mineral acid, and thermal sulfation is not used, as in the present invention.

Still further, in Carosella, the dross is ground to less than 200 meshes, whereas the flying powders or other residuals are not ground in the present method.

Finally, the use of sulfur in the smelting method of Carosella to produce the ferroalloy is an aberration, and goes against nature to introduce this element into the ferroalloy. The result is that sale of the product to a steel plant would be impossible, since steel manufacturers would not produce steel with this Fe-alloy anywhere in the world.

In Globus, a mineral having only small amounts of pyrolucite is sulfated with sulfur and H_2SO_4 in a mixed reactor, at a temperature of 200-300°C. The reaction takes 2 to 8 hours, whereas in the present invention, a reaction time of between 30 and 60 minutes is used, and there is no need to use sulfur.

Furthermore, in the present invention, the flying powders and other wastes very rarely have pyrolusite, and are a mixture of MnO, Mn_2O_3 , MnO_2 , beta-silicate of manganese, and the like,

these components being swept away from the load. Other components are the neoformation minerals: carbonate (rodochrosite) thermically broken, MnO_2 partially reduced, MnO of neoformation (Mn vapor reoxidized), beta-silicate of reaction between $Mn(v)$, MnO and $SiO(g)$, whose formation is thermodynamically favorable in the exit gases. Or, in other cases synthetic rodochrosite KMn_8O_{16} , or manganese hydroxides are present, as in electro-Zn, production.

Furthermore, in Globus, sulfur is added in the sulfation process, as well as an excess of H_2SO_4 , whereas sulfur and H_2SO_4 are never added in the present invention.

Furthermore, in Globus, treatment is carried at a temperature of from 200-300°C, and 5 hours, whereas the present process is carried out over 300°C, for 30-60 min.

In view of the above-noted differences between Applicants' invention and the prior art, a combination of the prior art does not make obvious Applicants' invention as set forth in the claims.

Accordingly, Applicants respectfully submit that the rejections under 35 U.S.C. 103(a) are unsustainable, and urge favorable reconsideration and withdrawal thereof.

It is believed that the present application is now in condition for allowance, and an early allowance to this effect is respectfully urged. If any final points remain that can be clarified by telephone, Examiner Ripa is encouraged to contact Applicants' attorney at the number indicated below.

Respectfully submitted



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